UNITED STATES PATENT AND TRADEMARK OFFICE

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10/781,865	02/20/2004	Hong-Jin Ahn	45823	5066

1609 7590 10/15/2007		EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _20 February 2004_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under _Ex parte Quayle_, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-28_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-28_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _20 February 2004_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some *   c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _See Continuation Sheet_.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :04/05/2005, 05/24/2006, 10/11/2006.

DETAILED ACTION

1.   **Claims 1-28** have been examined and are pending.

Priority

2.   Acknowledgment is made of applicant's claim for foreign priority under 35

U.S.C. 119(a)-(d).   The certified copy has been filed in parent Application No.

10781865 filed on 02/20/2004.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by
another filed in the United States before the invention by the applicant for patent or (2) a patent
granted on an application for patent by another filed in the United States before the invention by the
applicant for patent, except that an international application filed under the treaty defined in section
351(a) shall have the effects for purposes of this subsection of an application filed in the United States
only if the international application designated the United States and was published under Article 21(2)
of such treaty in the English language.

3.   **Claims 1-28** rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent

Publication No. 20030221016 to Jouppi et al. (hereinafter "Jouppi").

        As to Claims 1, 7, Jouppi teaches a method for performing Traffic Flow

Template (TFT) filtering according to Internet Protocol (IP) versions in a mobile

communication system capable of supporting an address of a first IP version

including first bits and an address of a second IP version including second bits

containing the first bits, the method comprising the steps of (as stated in par. 0002,

lines 1-8, par. 0005, lines 1-6 and par. 006, lines 1-4 and lines 14-17, a method and

an apparatus in a *telecommunication system, GPRS* services (General Packet Radio Service) and packet-switched services of the *UMTS* system (Universal Mobile Telecommunications System) utilize *PDP* (Packet Data Protocol) contexts, which is an *IPv4* or an *IPv6* address in transmitting user data. PDP contexts are logical connections with which the IP data is transmitted from a mobile station to the gateway *GPRS* support node *(GGSN)* of the UMTS network, and vice versa. *Interface identifier* allocated by the mobile station (MS) is used as a *filter (TFT filtering)* to guide *mapping* of data flows from a first subsystem to the terminal of a second subsystem. The *interface identifier* determined by the terminal refers to a *bit sequence*, which *reserves part* of the *bits* determined for the *interface identifier* in the *IPv6 address structure*):

extracting IP version-based information from a source IP address (as stated in par. 0039, lines 11-12, par. 0040, lines 1-6 and 0009, lines 1-4, *TFT* comprises filter parameters, *interface identifiers* of the *source IP addresses* (refers to the address of a peer device in an external network PDN), source gate, destination gate, flow identifier *(IPv6),* protocol number *(IPv4)/* the next address field *(IPv6) values*, of the packets to be transmitted and is generated in a mobile station by extracting these values for **TFT** filter parameters);

when TFT information is received and the received TFT information corresponds to the second IP version address into which the first IP version address is inserted extracting the first bits of the first IP version address from the second IP version address (as stated in par. 0038, lines 11-12, **TFT** templates are used for any **PDP**

context, including primary PDP contexts. In such a case, an interface identifier can

be determined for instance for all PDP contexts allocated to the **PDP** address and

comprising the **prefix** of the *IPv6* address structure allocated to the MS where

several interface identifiers or a certain area of interface addresses is used for filter

condition. Thus, the MS can freely allocate interface identifiers, which are also

updated for primary PDP contexts);

generating TFT information containing the extracted information and transmitting

the generated TFT information to a Gateway GPRS (General Packet Radio Service)

Support Node (GGSN). (as stated in par. 0039, lines 1-6, par. 0009, lines 1-6 and

par. 0003, lines 1-6 *TFT* contains *filters parameters* of the address field values, and

mobile terminal transmits these values of TCP/UDP/IP address fields to the gateway

GPRS support node *GGSN* for the identification of the flow);

generating new TFT information from the extracted first bits of the first IP version

address; when an IP address of received packet data corresponds to the second IP

version and the IP address is the second IP version address into which the first IP

version address is inserted extracting the first bits representing the first IP version

address from the second IP version address;

and performing the TFT packet filtering using the first bits extracted from the

received packet data (as stated in par. 0039, lines 1-6, par. 0009, lines 1-6 and par.

0003, lines 1-6, contents of the *TFT* template is transferred in a particular TFT

information element, which can be used to create a new TFT, to remove an existing

TFT and to add, remove or replace one or more *filters* of an existing TFT and thus performing packet filtering).

As to Claim 2, Jouppi teaches a method as set forth in claim 1, wherein the step of extracting the IP version-based information from the source IP address is performed by extracting the first bits of the first IP version address being the IP version-based information from the second IP version address when the source IP address is the second IP version address into which the first IP version address is inserted (as stated in par. 0035, lines 27-31, when a new PDP context is active, the mobile station (MS) concatenates an *interface identifier* for the **IPv6 *prefix*** allocated to it and transmit packets of the application plane APP, whereby the MS adds the *interface identifier* it has allocated as the *suffix* of the *IP source address* of the APP packets).

As to Claims 3, 8, 13, 19 and 25, Jouppi teaches a method and apparatus as set forth in Claims **1, 7, 12, 17 and 23** , wherein the second IP version address into which the first IP version address is inserted is a first IP version-compatible second IP version address or a first IP version-mapped second IP version address (as stated in par. 0039, lines 11-12 and par. 0040, lines 1-9 and par. 0006, lines 1-7, in TFT filtering, *part* of the *interface identifier* allocated by the terminal is used as a filter to guide *mapping* of data flows from a first subsystem to the terminal of a second subsystem).

As to Claims 4, 9, 14, 20 and 26 Jouppi teaches a method and apparatus as set forth in Claims **3, 8, 13, 19 and 25,** wherein the first IP version-compatible second IP version address is an address used between networks capable of supporting both a first IP of the first IP version and a second IP of the second IP version (as stated in par. 0004, lines 1-5, par. 0020, lines 1-17 and par. 0026, lines 1-17, the main parts of the mobile communication system are a *core network* **CN** and a **terrestrial radio network UTRAN** of the **UMTS** mobile communication system, which support both *Ipv4* and *Ipv6* to define the *PDP address* to be used for the mobile station).

As to Claims 5, 10, 15, 21 and 27 Jouppi teaches a method and apparatus as set forth in Claims **3, 8, 13, 19 and 25,** wherein the first IP version-mapped second IP version address is an address used between a network capable of supporting only a first IP of the first IP version and a network capable of supporting both the first IP of the first IP version and a second IP of the second IP version (as stated in par. 0004, lines 1-5 and par. 0026, lines 1-17, *UMTS* system support transmission of both *Ipv4* and *Ipv6* packets. And is applied to any packet-switched telecommunication system, wireless local area networks, Bluetooth systems, fourth-generation systems succeeding the UMTS system, or systems supporting packet-switched services of *second-generation mobile communication systems*, such as the *GPRS* system. The invention can also be applied to wired terminals and network elements supporting them).

As to Claims 6, 11, 16, 22 and 28 Jouppi teaches a method and apparatus as set forth in Claims **1, 7, 12, 18 and 23,** wherein the first IP version is an IPv4 (IP version 4) and the second IP version is an IP version 6 (IPv6) (as stated in par. 0026, lines 1-17, for receiving and transmitting packet-switched data, the MS activates at least one PDP context which makes the MS known in the gateway GPRS support node GGSN and forms a logical data transmission context in the mobile station MS, in the serving GPRS support node SGSN and in the gateway GPRS support node GGSN. In the establishment stage of the PDP context, a PDP address, which is an *IPv4* or an *IPv6* address (when the PDP type is IP), is determined for the MS).

As to Claim 12, 23 and 24 Jouppi teaches a method and apparatus, for performing Traffic Flow Template (TFT) filtering according to Internet Protocol versions in a mobile communication system capable of supporting an address of a first IP version including first bits and an address of a second IP version including second bits containing the first bits, the method comprising the steps of:

when a source IP address is the second IP address into which the first IP version address is inserted, allowing User Equipment (UE) to extract the first bits of the first IP version address from the second IP version address (as stated in preceding paragraphs of claim 1 and par. 0009, lines 1-11, the *interface identifiers* of the *source IP addresses* of the packets to be transmitted are observed in a wireless

terminal, and a list is maintained on the interface identifiers having been sent to the

network *node*. When an interface identifier that is not on the list is detected, it is

transmitted to the **network node**. In the network node, a *filter* is formed of the

received interface identifier. This allows maintaining one list by means of which the

allowed interface identifiers can be determined for all **PDP contexts** *(IP addresses)*

allocated to a *mobile station (User Equipment))*;

allowing the UE to generate packet filter contents from the extracted first bits of

the first IP version address, to generate TFT information containing the packet filter

contents, and to transmit the generated TFT information to a Gateway GPRS

(General Packet Radio Service) Support Node (GGSN) (as stated in preceding

paragraphs of claim 1 and par. 0026, lines, par. 0027, lines 1-5, in order to receive

and transmit packet-switched data, the **MS** activates at least one **PDP context**

which makes the **MS** known and forms a logical data transmission context in the

gateway GPRS support node GGSN and in the **mobile station MS**. PDP address,

which can be an **IPv4** or an **IPv6** address, is determined for the **MS**. The PDP

address is determined in addition to other PDP context. **IPv6** address comprises a

64-bit prefix and a 64-bit suffix comprising an **interface identifier**. The **interface**

identifier of the **suffix** is used in the gateway GPRS support node GGSN as a **filter**

for one or more PDP contexts, or as a general filter for the whole mobile station);

allowing the GGSN to store the TFT information received from the UE and to

extract the first bits representing the first IP version address from the second IP

version address when an IP address of received packet data corresponds to the

second IP version and the IP address is the second IP version address into which

the first IP version address is inserted;

and allowing the GGSN to perform the TFT packet filtering using the first bits

extracted from the received packet data (as stated in par. 0028, lines 1-10 and par.

0037, lines1-4, **GGSN** comprises a ***packet filter*** functionality FF, which attempts to

identify a certain flow or a group of flows by including information on possible

address **fields** in the form of **packet filter components** FI. These packet filters FI

comprise as at least one of their filter parameters an **interface identifier** that the **MS**

has allocated to itself and indicated to the **GGSN**. The packet filters FI are typically

PDP-context-specific, in addition to the interface identifier. The interface identifier

can thus be used as a new element in the TFT template, whereby the **GGSN**

receives the **TFT** template, **stores** it and **uses** it).

As to Claims 17 and 18, Jouppi teaches a method and apparatus for performing

Traffic Flow Template (TFT) filtering according to Internet Protocol (IP) versions in a

mobile communication system capable of supporting an address of a first IP version

including first bits and an address of a second IP version including second bits

containing the first bits, the apparatus comprising:

a controller for extracting the first bits of the first IP version address from the

second IP version address when TFT information is received and the received TFT

information corresponds to the second IP version address into which the first IP

version address is inserted, and for generating new TFT information from the extracted first bits of the first IP version address ;

and a memory for storing the received TFT information as the new TFT information (as stated in preceding paragraphs of claim 1 and par. 0025, lines, par. 0027, lines 1-5, operation of the **mobile station** MS is divided into two devices, for example into a *computer* **(controller)** operating as the **terminal equipment** TE and a UMTS communication device operating as mobile termination MT, the MT can observe the source IP addresses of applications of the TE and packets transmitted by the IP stack, particularly interface identifiers. *Computer* functions as **TFT filter** and stores TFT information in its *memory*).

Conclusion

4.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Pat. No. 6615269 to Suumaki et al., US Pat. Pub. No. 20030081592 to Krishnarajah et al., and US Pat. Pub. No. 20020016855 to Garrett et al. are cited for reference, but not considered.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Muktesh G. Gupta whose telephone number is 571-270-5011. The examiner can normally be reached on Monday-Friday, 8:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Taghi T. Arani can be reached on 571-272-3787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Muktesh G. Gupta   Dr. Taghi T. Arani

TAGHI ARANI
PRIMARY EXAMINER

10/10/07